

*NANNOSQUILLA VASQUEZI*, A NEW STOMATOPOD  
CRUSTACEAN FROM THE ATLANTIC  
COAST OF PANAMA

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*Abstract.*—The eighth Atlantic species of *Nannosquilla* is described from material collected in shallow water habitats at Punta Galeta, Atlantic coast of Panama. Species of *Nannosquilla* differ from other stomatopods in methods of egg brooding.

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In 1977, Rafael Vasquez M., then with the Station Marine d'Endoume, Marseilles, forwarded a small collection of stomatopods taken during an ecological survey of the Punta Galeta [09°24'N, 79°52'W] area on the Atlantic coast of Panama. Most of the specimens belong to an undescribed species of *Nannosquilla*, named below for Mr. Vasquez.

All of the specimens reported below have been deposited in the National Museum of Natural History, Smithsonian Institution, Washington (USNM).

I thank Mr. Vasquez for forwarding these specimens for study and M. Reaka, University of Maryland, for her comments on egg deposition in *Nannosquilla* and for reading the manuscript. The illustrations were prepared by my wife Lilly.

*Nannosquilla vasquezi*, new species

Figure 1

*Material.*—Panama, Atlantic coast, near Punta Galeta laboratory, Smithsonian Tropical Research Institute; 09°23.9'N, 79°51.81'W; in *Halodule wrightii* bed often exposed at low tide; R. Vasquez M., leg.: Sta. PCS 1c, 1 ♀ TL (total length) 23.5 mm; Sta. PCS 1d, 1 ♂ TL 20 mm; Sta. PCS 1g, 1 ♀ TL 21 mm; with ova; Sta. PCS 2c, 1 ♀ TL 21 mm; Sta. PCS 3a, 1 ♂ TL 18.5 mm; Sta. PCS 3b, 1 ♂ TL 17.5 mm, 1 ♀ TL 20 mm. The male from Sta. PCS 3a is the holotype (USNM 171349); the other specimens are paratypes.

*Diagnosis.*—Size small, total lengths of adults 17.5 to 23.5 mm. Cornea subglobular, set distally on stalk and slightly overhanging stalk laterally. Ocular scales erect, subquadrate, bases fused medially. Rostral plate quadrangular, lateral margins convex, subparallel, anterolateral angles rounded, unarmed, apex an obtuse point. Dactylus of claw with 7-9, usually 8, teeth, outer margin with 2 low prominences proximally, distalmost sharper. Mandibular palp absent. 4 epipods present. Sixth abdominal somite produced

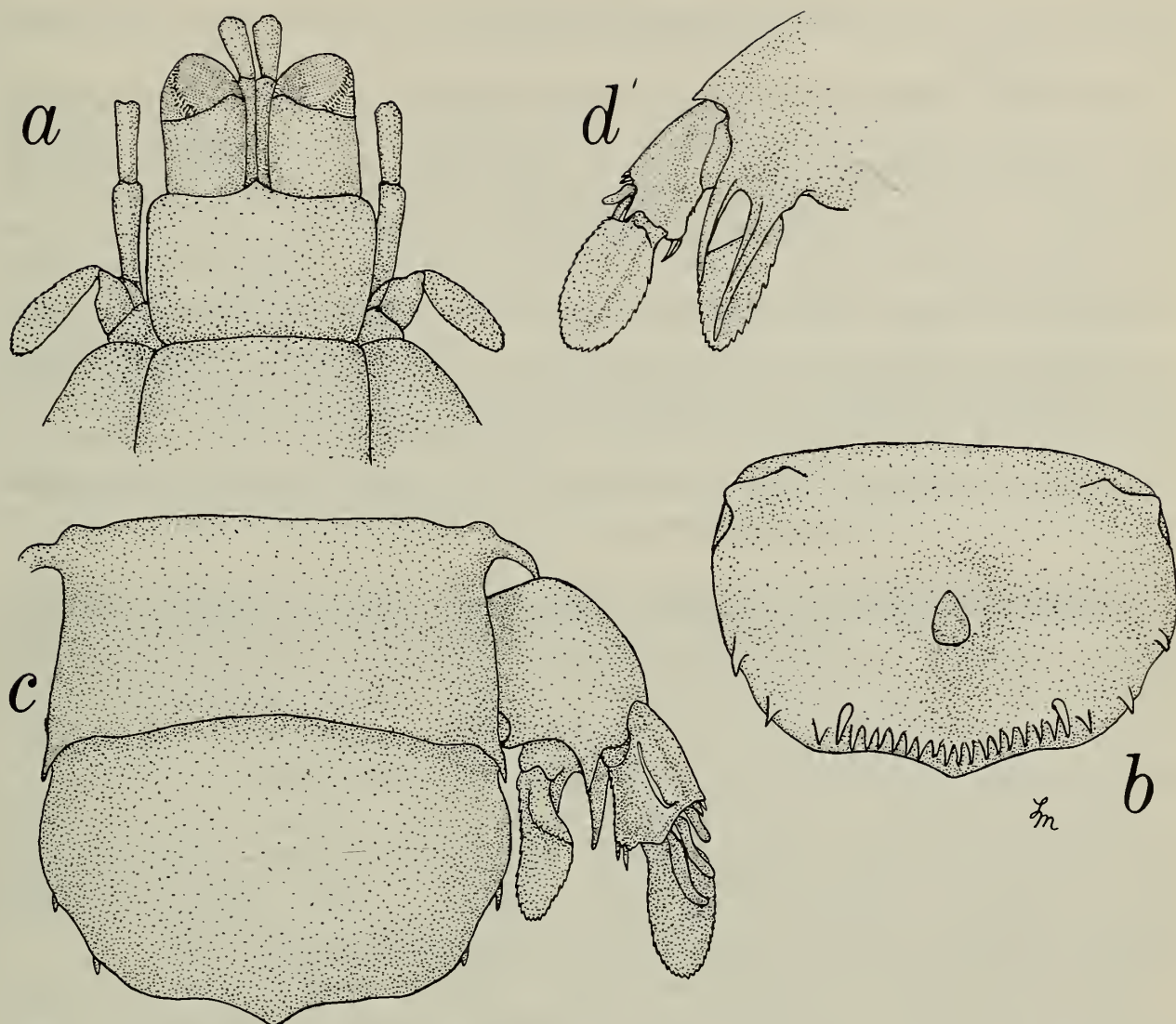


Fig. 1. *Nannosquilla vasquezi*, new species, female paratype, TL 23.5 mm; a, Anterior part of body; b, Sixth abdominal somite, telson and uropod; c, Telson, ventral view; d, Uropod, ventral view (setae omitted).

posterolaterally into sharp points. Telson broader than long, false eave with obtuse median projection only, submedian margins slightly concave, lateralmost marginal teeth partially or completely visible in dorsal view. Marginal armature consisting of (on either side of midline) 6–10 (usually 8–9) submedian denticles, mesials higher than laterals, 1 movable submedian tooth, adjacent to outermost denticle, and 3–4 (usually 4) fixed lateral teeth. Uropod with 2–3 stiff setae distally on inner margin and 4–5 (usually 5) movable spines, distal 3 spatulate, on outer margin of proximal segment of exopod. Inner spine of basal prolongation of uropod the longer.

*Color*.—Stellate brown chromatophores scattered over body, arranged in a line on posterior margins of thoracic and abdominal somites as well as along lateral margins of abdominal pleura. 2–3 pairs of larger spots present along gastric grooves.

*Size*.—Total lengths of males 17.5 to 20 mm, of females 20–23.5 mm. Ova

found loose in vial with female from Sta. PCS 1g were large, measuring  $0.8 \times 1.0$  mm.

*Remarks.*—This new species is very similar to *N. hancocki* (Manning, 1961), known from two localities off Venezuela: Isla Cubagua [ $10^{\circ}49'N$ ,  $64^{\circ}11'W$ ], the type-locality, in 4–9 m, and off Isla de Margarita [ $11^{\circ}00'N$ ,  $64^{\circ}00'W$ ], in 38–40 m (Manning, 1969:76). *Nannosquilla vasquezii* has less divergent lateral margins on the rostral plate, fewer teeth, 7–8 rather than 9–10, on the claw, and further differs in several aspects of telson structure: the false eave has only a median projection, the movable submedian teeth are adjacent to rather than anterior to the outer submedian denticles, and there are 3–4 rather than 5 fixed lateral teeth. Only two of the specimens of *N. vasquezii* examined had more than 3 fixed teeth lateral to the movable submedians and those specimens each had 3 teeth on one side, 4 on the other.

Habitat preferences of the two species may also be different. *Nannosquilla vasquezii* was collected in beds of *Halodule wrightii* near the low tide line. Mr. Vasquez noted that the part of the beds in which the specimens were found usually is exposed at low tide. *Nannosquilla hancocki* has been taken in depths of 4–9 m and 38–40 m, but not intertidally.

Manning (1969:69–83) provided accounts of the species of *Nannosquilla* than known from the western Atlantic. In the key to species given there (p. 71) *N. vasquezii* would key out with *N. hancocki*. Two additional western Atlantic species have been described since then (Manning, 1970).

In the vial with the female from Sta. PCS 1g were several loose ova, assumed to be the ova of this species. They were not formed into a ball. Stomatopoda are generally believed to carry their ova in a loose ball until the eggs hatch (Manning and Provenzano, 1963), but this is the third time that loose ova have been associated with a species of *Nannosquilla*. The first report was by Rathbun (1910:566) in her original account of *N. decemspinosa* from Peru, who noted that it was found “Living in vertical holes in the muddy sand of the inside beach at Capon. Small yellow eggs were often noted attached to the sides of the holes.” The second observation was reported by Manning (1967:149) in the original account of *N. anomala* from San Clemente Island, California, where it was noted that eggs were found in some of the burrows.

That some of the lysiosquillids differ from the squillids and gonodactylids in methods of egg care as well as in developmental stages (Gurney, 1946) suggests that the lysiosquillids comprise a fundamentally different stock from the other stomatopods. This could have wide ranging implications in stomatopod classification; the status of the Lysiosquillidae should now be investigated in light of these findings.

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